InkOrmo

UV-curable Hybrid Polymer for Ink-Jet Printing of Optical Micro Patterns

Unique features

- UV-curable ink-solution
  (solvent-diluted version of OrmoComp®)
- Low viscosity (solvent-ratio dependent)
- Compatible to standard ink-jet printing devices
- Excellent thermal, mechanical and chemical stability of cured patterns
- High transparency to near UV and visible light

Applications

- Single micro-lenses and micro-lens arrays
- Waveguides and microfluidic devices
- Spacers and protecting layers
- Large-area substrate processing

Physical data – Ink solution

- Spectral sensitivity: 300 - 410 nm
- Available viscosities: 18 mPa·s, 12 mPa·s, 7 mPa·s

Technical data – Cured material

- CTE (20-100 °C): 60 ppm/K
- Water absorption: < 0.5 %
- Hardness (by indentation): 68 ± 1 MPa

Process flow

- Substrate preparation
- Nozzle
- Printing and solvent evaporation
- UV curing
- Thermal treatment

Lens profile adjustment

Optical properties - Cured material

- Refractive index: 1.50 - 1.55
- Transmittance [%]: 40 - 80

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